

E-discovery in the Cloud When Fixing the Technology
Isn't Enough Weak Passwords Still Subvert IT Security

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VIEWPOINT



Dave Stevens

CHIEF TECHNOLOGY OFFICER
AND VICE PRESIDENT,
BROCADE

Dave Stevens is instrumental in driving Brocade's technology strategy, key business initiatives, mergers and acquisitions, and Brocade's investment portfolio as it expands its role in the evolving networking market.

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IT Transformation: Virtualizing the Enterprise

IT transformation is underway. Brocade CTO Dave Stevens explains this important shift and what it means to networks.

Can you describe the movement toward virtualizing the enterprise?

There is a major IT transformation underway, which is perhaps the biggest shift in the IT space that we've seen since the adoption of the Internet. It's driven by a number of external trends, such as the number of devices that are plugged into the network—by some estimates there will be more than 25 billion devices out there in the next few years. And at the other end of the connection, organizations are continuing to build big data centers as the cost of storage and processing capacity goes down and data center networks become more capable, higher performing, and less costly. Between those two end points you have to connect over the wide area; and over the years, those connections are becoming less expensive and massively more capable. So now you have an environment where enterprises are taking advantage of new infrastructures and leveraging the technology and applications needed to support an organization that is distributed over wide distances. Customers are going to use a combination of internal and external applications—the latter coming from cloud services, and they're combining those internal and external resources into a modern IT catalog that can support all users.

What are the characteristics of the virtual enterprise network?

The network needs to be able to run over distances, be more dynamic, and it must emphasize non-stop operations. If you have your entire organization based on applications that are running across the network infrastructure, there really isn't a good time to bring the network

down for maintenance. Also, applications must be optimized to run on the network infrastructure. For example, with virtualization, the internal and external network must be optimized to support the movement of virtual machines inside and between data centers. These changes have to be made incrementally, so that customers don't have to throw out network investments they've made in the last 20 years. We need to use new technology and processes, but also leverage assets that exist today.

How are networks changing to support these new requirements?

Inside the data center there's a big transition going on with the adoption of modular applications, like virtualization, where the hierarchical structure of the traditional data center doesn't operate very well. So there's a movement in the industry toward faster, flatter networks inside the data center, such as Ethernet fabrics. In the broader carrier networks, infrastructure is being built to support the high growth in traffic patterns, so the network has to have much higher performance and lower cost to fit this new model. And at the enterprise network level, these networks must be designed to be very resilient, automated, and cheaper to operate.

What business benefits can companies expect to gain from virtualizing the enterprise?

There are many: greater productivity, faster time to market, faster implementation of new applications, lower costs, and the ability to create a strategic advantage over the competition by using an array of information that can only be gained by amalgamating information from both local and remote resources. The network is really the glue that ties all these services and computing infrastructures together. ■



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HeadsUp

E-VOTING

Meg Whitman says her experience in politics left her better able to handle tough challenges in the business world.



PAUL SAKUMA / AP

IT MANAGEMENT

Whitman Plans to 'Stay the Course' at HP

DESPITE HER longstanding ties to presidential contender Mitt Romney, Hewlett-Packard CEO Meg Whitman assured a recent audience that she plans to stick it out with the company for the immediate future.

Whitman's recent losing try for the California governor's office was "the most difficult thing I have ever done. It was tremendously humbling," she told the Simmons Leadership Conference on April 5. After experiencing the rough-and-tumble world of politics, the mixed reaction to her appointment as HP's CEO last September was easy to take, she said.

Thanks to the time she spent in politics, "tough questions don't throw me off my game," Whitman said.

She added that she plans to stay at HP for the long term, no matter what the political

arena might bring. Romney was Whitman's boss at Bain & Co. early in her career, and he could conceivably ask her to join his administration should he win in November.

"HP needs consistency more than anything else," she said to spontaneous applause from a large group of HP employees seated together in the audience. "I must stay the course."

As Whitman moves the company forward, she maintains a belief in the importance of setting strategy.

"Strategy is about the art of exclusion, deciding what you're not going to do," she said. "And finally, if something isn't working, then you've got to do something different. The cost of inaction is far greater than the cost of making a mistake."

— Elizabeth Heichler, IDG News Service

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According to Dan McCrea, president of the Florida Voters Association, the incident highlights the crucial need for "statistically significant" post-election audits.

— JAIKUMAR VIJAYAN



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HEADS UP

BETWEEN THE LINES

By John Klossner



OPERATING SYSTEMS

Microsoft to Pull Plug on XP in Two Years

MICROSOFT HAS KICKED OFF what it calls a "two-year countdown" to the death of Windows XP and the Office 2003 productivity suite.

Separately, Microsoft announced that Windows Vista, the problem-plagued operating system that never really took hold among customers, exited mainstream support on April 10. In a product's extended support phase, Microsoft provides security patches to registered users but offers other fixes, including reliability and stability updates, only to organizations that have support contracts with the company.

Windows XP and Office 2003 will no longer be supported as of April 8, 2014, a company spokeswoman said in a recent blog post. On that date, Microsoft will stop shipping security updates for both products.

At that point, XP will have become Microsoft's longest-lived operating system. The company will have maintained the software for 12 years and five months — or about two

and a half years longer than it usually supports an OS. It supported the previous record-holder, Windows NT, for 11 years and five months.

Both XP and Office 2003 have been hugely successful. XP went on sale in October 2001, and Office 2003 launched in October 2003. "Windows XP and Office 2003 were great software releases, but the technology environment has shifted," said Stella Chernyak, a Microsoft marketing director.

Some customers will continue to run XP even after it is retired. About 16% of organizations "say they will have more than 5% of their users still on XP even after support ends," according to Gartner analyst Michael Silver, citing a survey his firm conducted in October 2011.

Not surprisingly, Microsoft wants users to upgrade to Windows 7 now. "If your organization has not started the migration to a modern PC, you are late," the company said, referring to data that indicates that enterprise OS migrations take 18 to 32 months.

— Gregg Keizer

Micro Burst

Microsoft has agreed to pay AOL

\$1 billion

for 800 undisclosed technology patents.

IT EDUCATION

CS Enrollments On the Rise, Up 10% in 2011-12

Interest in computer science continues to grow among undergraduates, according to a survey conducted by the Computing Research Association (CRA). The number of students pursuing computer science majors rose nearly 10% in the 2011-2012 academic year, marking the fourth straight year of increases.

The numbers might have been higher had it not been for enrollment caps that some schools set because they don't have enough faculty members, equipment or classrooms to meet demand, said the CRA.

"We don't have a way to gauge how many students wanted to be admitted," said Peter Harsha, the CRA's director of government affairs. The association reported a 10% enrollment gain last year as well.

This trend is in sharp contrast to the state of affairs after the dot-com bubble burst in 2001. As dot-com fever built, so did enrollments in computer science programs at Ph.D.-granting institutions, the only schools that the CRA surveys. Average enrollments had risen to 400 computer science students at the height of the bubble, by 2006-2007, that figure had fallen to around 200.

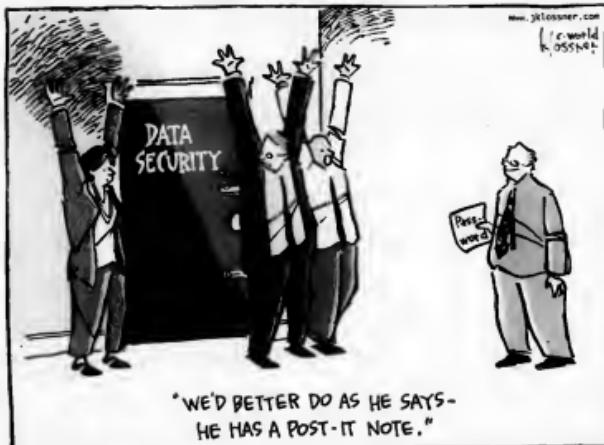
Today's enrollment average is around 300 students per program, the CRA said.

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Today's enrollment average is around 300 students per program, the CRA said.

— PATRICK THIBODEAU

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Weak Passwords Still Subvert IT Security

Despite years of warnings, analysts say enterprises continue to be plagued by 'the curse of the reusable password.' By **Jaikumar Vijayan**

A RECENT DATA BREACH that exposed the Social Security numbers of more than 280,000 people served as yet another reminder of the well-recognized, but often discounted, risks associated with using weak and default passwords.

In the breach of the Medicaid server at the Utah Department of Health late last month, the hackers — believed to be from Eastern Europe — exploited a configuration error at the authentication layer of the server hosting the compromised data, according to Utah IT officials.

Many security analysts see that formal explanation as a somewhat euphemistic admission that the breached server was using a default administrative password or an easily guessable one, thereby allowing the attackers to bypass the perimeter, network- and application-level security controls built to protect the agency's systems.

While such mistakes are easy to avoid, they're surprisingly common despite years of warnings about the dangers of using

At this stage of the IT game, there is really no excuse for using default passwords.

passwords that hackers can easily guess.

For example, the U.S. Department of Energy said a security audit at the Bonneville Power Administration, an agency that provides some 30% of the wholesale power to utilities in the Pacific Northwest, identified 11 servers configured with easily guessable passwords.

Four of those servers allowed remote users to access and modify shared files. Another server, which hosted an administrator account, was protected only with a default password, according to the report released late last month.

Meanwhile, Gartner analysts believe that hackers exploited weak authentication mechanisms earlier this month in a breach at payment processing company Global Payments that exposed credit- and debit-card data of about 1.5 million people. And it's believed that compromised administrator accounts were the target of hackers who perpetrated attacks on the U.S. Chamber of Commerce and open-source WineHQ databases last year.

Moreover, Verizon's latest annual report on worldwide data breaches concluded that attacks exploiting weak passwords are still especially endemic in the retail and hospitality industries. The Verizon report said learning the passwords used to access such sites requires "little in-depth knowledge or creativity."

Gartner analyst John Pescatore said the Anonymous hacking collective takes advantage of the very human tendency to use the same password for multiple accounts.

"A lot of Anonymous' recent success has been in attacks where they have obtained users' passwords to external services and then found the same passwords in use at sensitive internal applications or in email systems," Pescatore said. That is "the curse of the reusable password," he added.

"The truth is, anyone trying to protect nontrivial assets should be using multifactor authentication and/or complementary controls to protect themselves," said Peter Lindstrom, an analyst with Spire Security. "The password has too many weaknesses, including the obvious human ones."

Most password schemes that aren't protected by another form of authentication or lockout controls are susceptible to brute-force attacks, in which automated tools are used to guess passwords, said Lindstrom.

"At this stage of the IT game," he added, "there is really no excuse for using default passwords." *

John Abate is the *IDG News Service* contributed to this story.

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IT Skills Gap Forces CIOs to Get Creative

Employers are offering innovative training programs to help IT staffers master the skills they need in today's evolving market. By Lucas Mearian

FINDING IT WORKERS who are well versed in ever-changing technologies like wireless networking, cloud computing, mobile security and big data analytics is becoming increasingly difficult for CIOs.

To make up for the lack of expertise in such areas, IT managers are looking for job seekers trained in multiple disciplines, and they're implementing cross-training programs for the workers they have.

At Computerworld's SNW Spring 2012 conference in Dallas earlier this month, several IT executives described steps they're taking to hire multiskilled workers and to break down silos of specialization within IT's ranks.

"I need people who have two or three areas of expertise," said David Richter, vice president of infrastructure solutions at Kimberly-Clark. "I need a broader bench. [We] are focused on training people to make them more competent in their current role — and their next role."

The Irving, Texas-based paper products maker cross-trains IT staffers by rotating people into new roles for six-month periods, Richter said. Kimberly-Clark has also cut the number of IT job descriptions from more than 350 to about 40, many of which require multiple skills, he added.

At Cook Children's Health Care System in Fort Worth, Texas, the IT staff has doubled over the past three years or so, but CIO Theresa Meadows said she still needs to expand employees' skill sets, particularly in the areas of security and analytics. She noted that the health-care provider must comply with ever-changing regulations enacted to ensure the security of patient information, and it's under pressure to embrace big data analytics tools that can parse medical information so it's more useful to physicians, nurses and medical technicians.

To help people master new skills, the healthcare provider launched a so-called "pod" training program that groups three



IT employees — a veteran, a midterm worker and a new hire, each with expertise in different areas — on a team so they can learn from one another, said Meadows.

One team has "one Citrix admin who was really our only skilled administrator who is now training the other two," she said. For their part, the other two are training the Citrix admin on "newer skills just coming into our organization," she added.

The pod concept is particularly useful for employees who have received technical training but don't have hands-on experience. Learning from senior colleagues helps them become comfortable more quickly, she said.

At United Orthopedic Group, a Carlsbad, Calif.-based maker of non-invasive orthopedic rehabilitation products, IT workers must be multiskilled because the staff is small. Among other things, CIO James Clem is training his employees to better communicate with their colleagues on the business side.

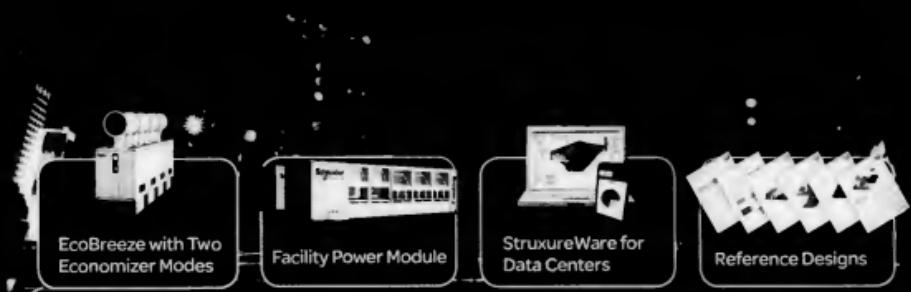
"I see my technicians talking to a customer and the customer's eyes glaze over," Clem said. "They need to be able to get their message across. Communication is the No. 1 thing to make IT and the business successful."

The company also offers online instruction on financial analysis, project management and decision-making, allowing IT workers to learn on their own time or during work breaks.

Clem noted that the program is cost-effective even though the training could make employees attractive to other employers: "It's an investment I'm willing to make because it delivers so much value to the company." ♦

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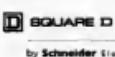
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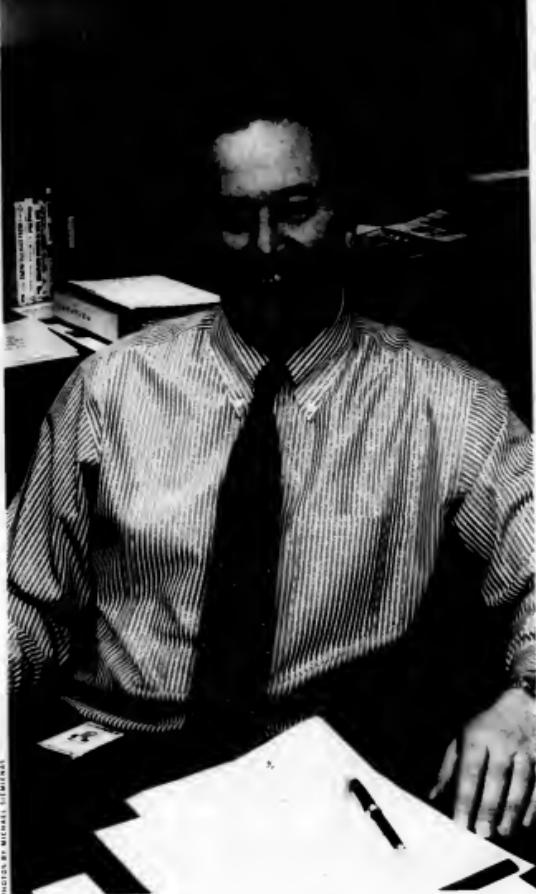
I love what's going on in mobility. It's bringing technology everywhere we go. We have higher-powered computers in our pockets, and we're just beginning to understand the opportunities for how we use that technology. It's revolutionary.

What do you do in your spare time? A lot of motorboating, jet skiing and water sports.

What's the best piece of advice you've ever gotten? Be concerned about the total organization, not your function. Always have that in mind.

What's the best piece of advice you've ever given? If you want to move to the next job, start doing it today.

PHOTO BY MICHAEL STUMBERG



In April 2010, when Wayne Shurts stepped into the role of executive vice president and CIO at SuperValu, a U.S. grocery retailer and distributor whose brands include the Albertsons and Shaw's/Stop & Shop Market chains, he brought skills he had honed as an IT executive at Cadbury, as well as two decades of experience in finance, marketing and sales at Nabisco. Shurts, who has an MBA in marketing from Seton Hall University, also spent several years as head of his own consulting firm, which specialized in transformational technology strategies. He's now working to help the IT department at SuperValu better support the company's overall business.

You recently deployed Yammer to support collaboration. How did that come about? Our CEO, Craig Herkert, was the champion. Craig attended a Microsoft CEO summit in the fall of 2010, and concurrent with that we had been using Yammer's public free site; some grass-roots people got it started. Craig is very much a technology-focused CEO. He has

Continued on page 14



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“ You absolutely have to start with speed in mind, and move from designing systems in conference rooms to working on the store floor or the warehouse floor.

for our merchants. They're doing a lot more models about what's the best promotion to run at this time of year, what prices to cut.

How do you ensure IT develops and deploys the right tools to bring business value? It's looking at what the business is trying to accomplish and how we can enable that. That's how the promotion tool was born. Our agenda starts with direct conversations with the merchandisers, the marketing folks, the retail folks. We call it "intensely business-focused IT." We've also organized IT the way the business is organized. We've embedded IT people in the business. We're trying to do IT from the business up. My direct reports report to me, but they also have a strong dotted line to their [business area] executive vice presidents.

How do you balance IT costs against the need to innovate and move forward while keeping up with

Continued from page 12
kids, so he understands the power of social media, and he came back on fire for what social media could do for Super-Valu. In nine months' time, the audience grew from a handful of people to more than 8,000 folks. It's really taken off, and it's done all those things that Craig envisioned.

Tell me about some of your other key deployments and how they're improving business performance? One key thing that's about a year old now is the promotion analysis tool. It allows our managers to use analytics to model the effect of what a certain promotion will yield, to see what will deliver the best performance and margins. It's a pretty sophisticated tool that has really allowed us to get tens, if not hundreds, of millions of dollars out of it. That promotion tool has been a significant win

maintenance in an industry known for thin profit margins? We have a multiyear ongoing cost savings initiative going on here in IT. We're looking for cost savings, looking for ways to do what we do today cheaper. The good news is technology gets cheaper over time. And new technology, like the cloud, when you deploy it right, can be done the same or better or cheaper. And with this intensely business-focused IT, we use technology in a way that can get the job done in a cost-effective way.

How do you define agility within an IT organization?

I would define it as speed, and it's something that IT traditionally hasn't been good at — bringing about quick solutions in a quick time frame. How can we work with the business and turn around new capabilities, functions, systems in a very fast time frame? I'm talking about three weeks or three months — not 18 months or three years, like IT normally works. Agility requires a new way of thinking and working, both for IT and business. You absolutely have to start with speed in mind, and move from designing systems in conference rooms to working on the store floor or the warehouse floor, working directly with the end users, rapidly developing prototypes, iterating, finding out what works and just developing in a completely different fashion, testing as you go.

How do you balance agility with other requirements — such as guaranteeing that systems do what they're supposed to do, security needs, usability and so on? There are two things that we found, two approaches we're taking. We set folks off to begin doing the prototype and iterations with the business, have them start using it, changing it later. That's a very agile, interactive process. We end up with something we're using and that's solving a problem, and that's great. But you might look at that product at the end of the day and say, "It's wonderful, we got it done fast," but it's not really scalable to 4,000 stores. So we bring in folks who look at it and say, "How do we make it industrial strength?"

The other thing we've found is that speed and quality are complementary. By working with the business to develop an application, we get a much greater quality application because it's grown up through real-life use, [not] where we sit in the conference room and envision the way it should work and develop it over a long period of time.

If the lines continue to blur in the future, will the CIO role become obsolete? There will always be a need for a CIO or a role like that. I actually think the lines are blurring because technology is becoming more ubiquitous, but we still need an enterprise view to bring things together.

— Interview by Computerworld contributing writer
Mary K. Pratt (marykpratt@verizon.net)

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Paul Glen, CEO of Leading Geeks, is devoted to clarifying the murky world of human emotion for people who gravitate toward concrete thinking. His newest book is *8 Steps to Restoring Client Trust: A Professional's Guide to Managing Client Conflict*. You can contact him at info@leadinggeeks.com.

Fixing the Technology Isn't Always Enough

EVERY IT PERSON has had one of these situations. A user comes to you with a problem. You fix it and announce, "Problem solved" or "Case closed." But you're met with a long, uncomfortable silence or a blank stare. It's an awkward moment that you can end only by

saying something like, "Well, let me know if there's anything else I can do for you," before shuffling away, wondering where you went wrong.

Where we go wrong, more often than not, is in handling the facts of a problem but not the feelings that accompany it. The technology problem is solved, but the feelings that the problem aroused in the user — anger, disappointment or frustration — are unresolved.

I can imagine what you have to say to that: "Dealing with feelings is not in my skill set." We geeks are adept at handling the facts of people's problems and notoriously oblivious to their feelings. But if you want to be good at working with non-technical people, you have to expand your ability to deal with both. Whether they ask for it or not, whether they realize it or not, they need you to help them resolve both to move forward.

So why don't they just tell you that they're upset? Two reasons: At work, people don't feel comfortable talking about feelings. It's safer to complain about facts. And sometimes it's hard to put feelings into words. People may not even be able to articulate the nature of their disappointment.

I happen to think that geeks can handle these situations. We're problem-solvers, and if we just expand our definition of the problems we solve to include both the facts and the underlying feelings, we can deal with them like any other difficulty. Relax; you don't have to be Dr. Phil. You just need to use some responsive words and send subtle signals that show you care.

Empathize methodically. Train yourself to

recognize emotions that aren't explicitly stated. Listen to users' word choices. ("It just died on me.") Recognize the feelings in their tone of voice. Put yourself in their shoes. Then, simply acknowledge what they're feeling by saying something such as, "This must be really frustrating for you." When you do that, users feel that you are trying to help them, as people, rather than just tending to the machines. And when the problem is solved and the case closed, speak to both the technical and experiential parts of the problem. Say something like, "It's working now and should make your life a whole lot easier." Seriously — it's that simple.

Apoloize with dignity. Sometimes a simple apology will make the difference, even though you have nothing to apologize for. It's not a sign of weakness to let someone know you're sorry that they're experiencing discomfort or inconvenience. It's not necessarily an admission of personal guilt either. Just say, "I'm sorry that this is so difficult."

Share your own feelings about the situation. It comforts people to know that they aren't the only ones who might feel a certain way about a situation. Letting them know about your own experiences allows you to build a relationship rather than conduct a transaction. When you say, "This has been keeping me up at night too," you're sharing in the person's urgency and upset.

Technical people who can navigate both facts and feelings are the ones that business people really want to work with. When you include the user's emotional life in your problem definition, you become that magical person who can work with anyone. *

Check “Launch website” off the list (before lunch)



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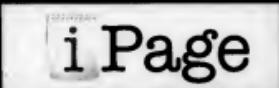
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THE UPSIDE OF
Shadow IT

Rather than standing
in the way, smart CIOs are now
embracing and even encouraging
shadow IT.



Noah Broadwater,
Sesame Workshop's
CTO, says his IT shop
is no longer dictatorial.
Now, it's more
service-oriented.

FIRST, A SCARY STATISTIC: Gartner predicts that in less than three years, 35% of enterprise IT expenditures will happen outside of the corporate IT budget. Employees will regularly subscribe to collaboration, analytic and other cloud services they want, all with the press of a button. Others will simply build their own applications using readily available cloud-based tools and development platforms. Either way, the corporate IT department will be bypassed. As one industry pundit put it, "it will feel like the inmates are running the asylum."

Now, the reality: Employees have been doing an end run around corporate IT and using shadow IT systems — that is, systems built and used in companies without organizational approval — for decades. Look no further than the volumes of company and customer data stored in Excel files scattered from here to kingdom come. Indeed, results of PricewaterhouseCoopers' Digital IQ Survey indicate that 100 of the companies PwC ranks as "top performers," IT controls less than 50% of corporate technology expenditures.

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MARK DAJANI.

in many cases, the person who understands what to buy is not an IT person," says John Murray, CIO at Genworth Wealth Management in Pleasant Hill, Calif. "Classic shadow IT is out there, and if it's something that is serving a purely functional need and is something that is not customer-facing, it's the worst thing in the world."

So what's the big deal about the Gartner statistic, and why does it spook so many of today's IT professionals?

There's the loss of control, of course. But more alarming is the exponential growth in the number

of rapidly emerging consumer technologies, cloud services and roll-your-own apps. It's both a volume and velocity issue. Ten years ago, in contrast, a scant 10% of tech expenditures happened outside of IT, according to Dion Hinchcliffe, a veteran business and IT strategist and executive vice president at Dachis Group, a social business consultancy in Austin. "Now, IT is cheap, often free. That allows people to evaluate and acquire solutions on the ground," he notes.

And more of the workforce is doing just that. "In general, people are much more tech-savvy. They know what is possible. Everyone is trained that 'there's an app for that,'" Hinchcliffe says.



Innovation At the Edges

Jtech-savvy business users are increasingly tapping consumer-type apps and other shadow systems to do their day-to-day work. There is still plenty of room — and need — for innovation from IT, experts say.

Rather than standing in the way, some of the savviest CIOs are embracing and even encouraging so-called rogue IT.

As Kraft Foods CIO Mark Dajani put it, "Why create a technology environment that will just drive to average [business] performance? To empower employees to do it their way is a huge deal. It's an inevitable reality. As I see it, there's a bigger risk associated with not doing that."

Here's how you can — and why you should — lead your technology organization through the transition from "command-and-control IT" to what Hinchcliffe calls "cooperative IT."

Accept the Inevitable

At Genworth, the company's trading team is using an outside application developer for certain services. "IT knows about it, but we're not driving it," Murray says, noting that IT doesn't operate at the speed that the trading team requires.

Today, "applications are not done by IT; releases are not done by IT. Instead, [business is] operating in a different sandbox, which requires a different team and a different cycle," he says. Instead of tussling over ownership and control of certain services and applications, Murray says IT focuses on what data the applications use, whether or not an application is mission-critical, and who is in the best position to know the application is running properly.

"The world is changing, and you have to be honest

enough to acknowledge that your business customer is sometimes the most appropriate owner of a particular application," he says.

Instead of fighting to retain control, IT leadership should focus on managing risk and learn to spot where employees are adding value with their self-provisioned tools and services, says Brian Lillie, CIO at Equinix, a Redwood City, Calif.-based company that operates large data centers in 13 countries.

Workers in Equinix's vertical marketing group used the Amazon cloud to build what Lillie describes as "a very slick sales tool" that measures network latency around the world, depending on where your IT assets are located.

"My team didn't do it, but I still like to brag about it. It's a key tool," Lillie says. Now, IT is exploring how to integrate the tool into other systems at the company.

"Instead of us throwing up roadblocks, we said, 'Let's enable this and give these guys a way to exploit it,'" he says. "It definitely requires a mind shift [for IT]. "But people are creative and want to innovate, and sometimes real breakthroughs can come from anywhere."

Get Ahead of the Demand

New York-based Sesame Workshop, the producer of *Sesame Street*, has more than 100 employees working with outside vendors to make interactive games and toys licensed by the nonprofit organization. They were using cloud and consumer technologies, such as YouSendIt, a digital file delivery service for exchang-



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JUST BECAUSE tech-savvy business users are increasingly tapping consumer-type apps and other shadow systems to do their day-to-day work, there is still plenty of room — and need — for innovation from IT, experts say.

Yet to provide truly self-innovative IT that will not only meet the organization's needs but also keep up with the latest trends in business,

IT must be willing to break out of the traditional organizational silos where the IT department is the IT department and IT has little role in the rest of the organization. That's the view of Dion Hinchcliffe, CIO of Dachis Group, at the time of this writing. "The IT department is the IT department, and the rest of the organization is the rest of the organization," he says.

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and sharing files, when they realized they were missing a key ingredient: they needed to be able to control the content and experience of consumers.

"We knew people [of different ages] have different interests and different ways of interacting with content, so we wanted to be able to control that," says Mark Lippman, director of IT at Sesame Workshop. "We wanted to be able to control the experience of the consumer."

After a year of research, the company found a way to do that by using a cloud-based platform called the Content Delivery Network (CDN) from Akamai Technologies.

With Akamai's help, Sesame Workshop was able to create a platform that can serve up different versions of its content to different users based on their location and device.

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COVER STORY

ing large design and video files. CTO Noah Broadwater took notice, and then contacted YouSendIt to secure an enterprise version of the popular service.

The upshot: "IT has become a trusted business partner. It now helps users with contracts," says Broadwater.

The IT group also launched a dedicated R&D group that focuses specifically on consumer technologies and works on projects dealing with how to best leverage Facebook, Google, Twitter and mobile devices. Broadwater is fond of pointing out that Sesame Street character Big Bird has been tweeting for the last two and a half years.

"By having early adopters in IT and getting ahead of technologies, users will now come to us when they want to use something like Basecamp [a Web app for storing, coordinating and managing projects]," Broadwater explains. "When they do, we tell them about Central Desktop," which he describes as a similar cloud-based project management service "but with better integration into the enterprise."

The challenge is that sometimes when something has been OK'd, then it's not cool. There's a coolness to being in the shadows, which drives me nuts.

BRIAN LILLIE, CIO

Today, Sesame Street co-producers in offices as far away as Afghanistan and Pakistan can upload rough cuts of video to the cloud, and producers in New York can edit and annotate it, he says, noting that 30% of expenses within the official IT budget at Sesame Workshop are devoted to cloud services, consumer services and mobile enablement.

"It used to be dictatorial, issuing edicts and hammering on security, security, security," Broadwater says. "Now, we've moved to where we're a service organization."

Broadwater also notes that what was once considered shadow IT has also saved the company money. For example, the enterprise YouSendIt service, which costs \$50,000 for two years, replaced FTP services that were costing \$140,000 for the same period. Similarly, before using Central Desktop, staffers were physically shipping hard drives. The cloud-based service has cut those costs by \$20,000, Broadwater says.

At Equinix, Lillie set up an "Amazon sandbox" for developers who were buying Amazon's cloud services on their own to develop apps.

Developing apps on Amazon, he says, is great "because it doesn't tax IT's resources. But as opposed to employees pulling out their credit cards and

paying for Amazon on their own, why not give it to them? You become part of shadow IT and the lines start to blur," he says. "IT is expanding its influence, and more importantly, you're working as a team."

But there is a downside.

"The challenge is that sometimes when something has been OK'd, then it's not cool," says Lillie. "There's a coolness to being in the shadows, which drives me nuts."

Redefine IT's Role as Educator and Policymaker

"Consumerization of IT is an inevitable reality," says Kraft's Dajani. One of IT's expanding roles in this new world is to develop and implement security and other policies that help rather than hinder employees, regardless of the device they use to do their work.

Kraft, for example, is virtualizing its applications environment so mobile workers in particular can use the device of their choice. "But users have to keep their versions of software up to date, and we keep track of that," Dajani says. "If people are running software on Androids and it's not up to date after 30 days, we lock them out."

"We need to empower employees, and we also need to teach them," he adds.

Todd Coombes, CIO at insurer CNO in Indianapolis,

works with his peers in the lines of business to develop policies that will work for both IT and users who want to innovate using Web-based apps and consumer technology.

"If I were to take a hard line and say 'no shadow IT,' I'm not going to be adding any value for my business partners, and it will create resentments and wreck relationships," Coombes says. Moreover, many of the most innovative ideas for high-value productivity applications come from workers in the field, he adds.

CNO's T64 application (T64 is short for Turning 64), for example, was developed by the company's independent agents who sell insurance door-to-door, mainly to retirees. The T64 app lets agents see on their mobile devices a list of potential clients who are turning 64 years old, along with directions to the clients' homes.

"We're in this together" is now much more than a tagline," says Rick Bauer, a former CIO and now director of product management at CompTIA, a provider of vendor-neutral certifications for IT professionals. "No one else is going to educate the enterprise about using devices in ways that boost productivity and in ways that are safe. IT has got to be a leader in helping people to think about these things."

Find Your Allies

If you're looking for shadow IT, one of the first places you'll find it is in the sales and marketing department, experts say. These front-line workers have little patience with time-consuming, checklist-laden application development cycles, which is what they have come to expect from IT. They want what they want, and they want it now. So they often gin it up for themselves.

"There's a disconnect between the traditional IT mindset and trying to get out a new application in a timely manner," notes PwC principal Chris Curran. "When a sales guy comes to IT and says, 'We need to get something out there now,' it can't take a year."

Curran advises PwC's clients to make friends with and learn from business users. More than likely, many have already been experimenting, especially with cloud-based apps for analytics and processing big data, he says.

At Genworth, Murray revamped the IT pay structure to reflect the value of building relationships with people outside of IT. As he sees it, knowing your partners in the business is part of IT becoming more agile.

"The core tenet of agile development is that everyone who has a say in a project is in the room interacting with each other," he says. IT staff can't do that if they don't know their business counterparts.

"Behavior tends to follow the compensation

structure, so everyone in IT has a goal of relationship-building with business partners," Murray says. "You want to have social equity to trade on. Every project has bumps in the night and when that happens, you want and need the social equity [with your business partners] to cushion you through it," he explains.

In fact, social equity is a key metric during IT employee reviews at Genworth. "If you have someone who is technically excellent, but they've never had lunch with their customer or know what sports their kids play, you haven't succeeded," Murray says. "You haven't become integrated into the [larger] organization."

The bottom line, these CIOs say, is that the corporate technology landscape has changed for good, and the IT organization must change with it. IT must focus on those areas where it can add the greatest value — providing workers around the corporate edges with secure access to data and tools to innovate — even if that means application development tools.

"IT's role is to enable people to solve problems on the ground," says CompTIA's Bauer. "The CIOs and IT organizations that will be winners are those that understand that the game has changed in ways that will never revert back to the way IT was before. Like the church of existentialism, we don't quite know where we're going, but we're on our way." •

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DON'T WAIT UNTIL THE LAWYERS COME CALLING TO FIGURE OUT IF YOU CAN FIND YOUR CLOUD-BASED DATA. By Tam Harbert

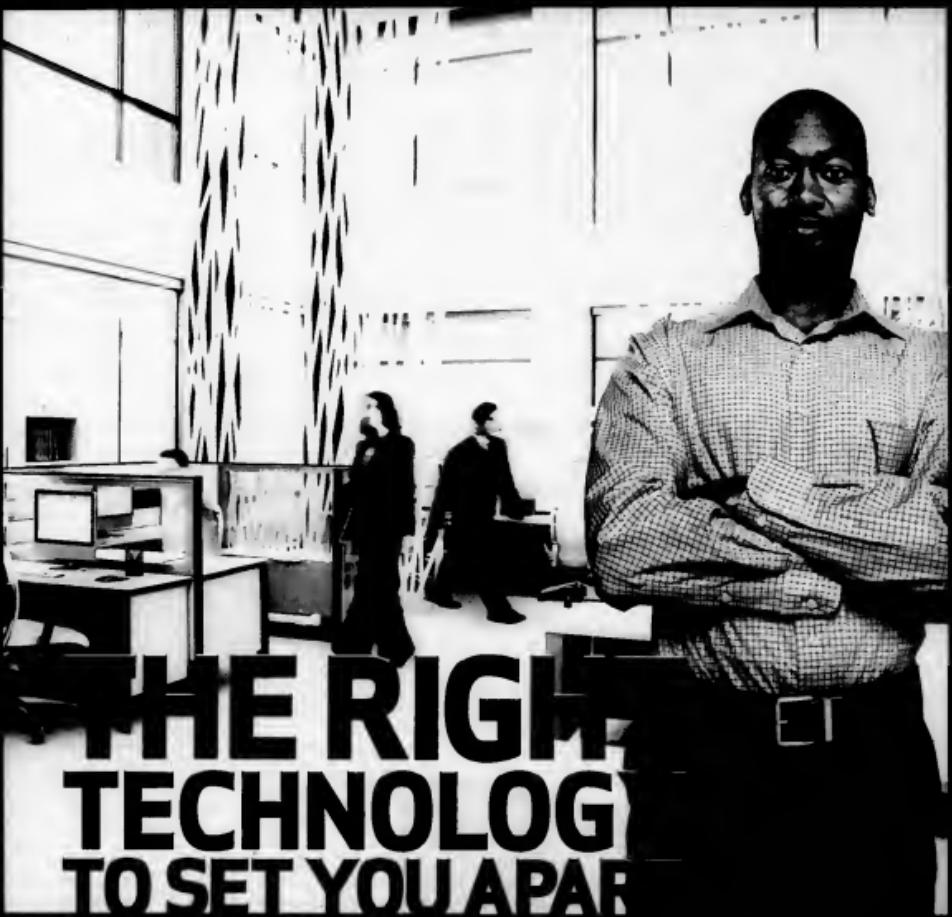
YOUR COMPANY is embroiled in a lawsuit, and your general counsel has come to IT for help in conducting e-discovery on a batch of data. You easily gather some of the information from storage in your data center, but the rest of it is sitting in the cloud.

Easy enough, you think, to get that data as well.

You may be in for a rude awakening.

Many lawyers and IT staffers "just assume if they put data in the cloud it's going to be at their fingertips, that it's inherently discoverable," says Barry Murphy, co-founder and principal analyst at

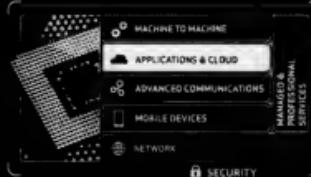
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CLOUD COMPUTING

Continued from page 24

eDJ Group, a consulting firm specializing in e-discovery. "That's not necessarily the case."

Under the Federal Rules of Civil Procedure, a party to litigation is expected to preserve and be able to produce electronically stored information that is in its "possession, custody or control." But in the cloud, the situation isn't so clear. Information that's electronically stored in the cloud is presumably under your control, but it may not technically be in your possession, says James M. Kunick, principal and chair of the intellectual property and technology practice at law firm Much Shelist.

Because this area is so new, the legal ramifications of storing data in the cloud are still murky. Among the few instances of relevant case law is *Gordon Partners v. Blumenthal*, which found that if a company has "access to documents to conduct business, [then] it has possession, custody and control of the documents for purpose of discovery," according to Murphy.

You need to make sure your contract with the provider allows you to control what happens if they get a subpoena.

JAMES M. KUNICK, PRINCIPAL, MUCH SHELIST

That finding could pose a significant problem. Depending upon the relationship it has with its cloud vendor, a company might not know exactly where its data is stored. And even if it does, it might not be able to access information in the cloud in the right format and in a timely manner.

And then there is a danger that companies can lose control over access to that data — opposing attorneys, for example, might subpoena not only your company, but also your cloud provider. "You need to make sure your contract with the provider allows you to control what happens if they get a subpoena," Kunick warns.

Know the Potential Problems

And yet most companies are blissfully unaware of the potential problems with e-discovery, says Murphy. In a recent survey of legal and IT professionals who use cloud services, Murphy found that less than 16% of 172 respondents had put an e-discovery plan in place before moving data to the cloud. Even more alarming, he says, nearly 60% of the respondents said that they didn't know whether they had an e-discovery plan or not.

In another survey, conducted last year by Clearwell Systems (an e-discovery vendor acquired by Symantec last year) and consulting firm Enterprise Strategy Group, nearly 60% of more than 100 Fortune 2000 enterprises and government agencies

said they felt that their cloud-based applications could potentially be subject to e-discovery.

In the same survey, however, only 26% of the respondents said they considered themselves somewhat or very prepared for e-discovery requests. In other words, says ESG analyst Katelyn Wood, "they said yes, they think they'll have litigation, but no, they are not prepared for it."

Murphy says he thinks lawyers might even start to target cloud-based sources of information, hoping to catch opponents unprepared. A wily opposing attorney could, for example, request discovery of data in a software-as-a-service provider's system, knowing that most companies have little experience collecting data from that particular source.

"Until we have a successful anecdote in which someone gets sued and they run their search successfully on data in the cloud, until they've actually done it at speed and to scale, we won't really know" how prepared companies are for e-discovery in the cloud, he says.

Tom Conophy, CIO of InterContinental Hotels Group, is one executive who believes he's got his bases covered. One of the \$18 billion hospitality company's many cloud initiatives is a project to move its global reservations system, now on a mainframe, to the cloud.

IHG is in the process of choosing a cloud provider. In discussions about contract terms, the company is being "very careful about making sure that our intellectual property and our content is ours, and that at any given time we have the ability to access it, export it, turn it off — whatever we need to do with it," says Conophy. "It's no different than if it was running in our own [data center]."

Be Mindful of Email, Social Media

Potential e-discovery problems vary depending on the type of cloud provider and the contract, observers say. Because email has been subject to e-discovery for a while, many email hosting providers have this covered in their contracts. And large cloud vendors that typically serve Fortune 500 companies are likely to pay more attention to the discoverability of data.

With other providers, the area can be murky. "A lot is negotiated on a vendor-by-vendor basis," says Wood.

The ease with which you can get data out of a SaaS-based system depends on the vendor. Salesforce.com, for example, "is not an easily searchable system — because it's not a content management system per se — and yet people are storing information there," says Murphy.

Social media represents a big challenge. Sites such as Facebook, LinkedIn and Twitter rely on standard contracts with users — both individuals and organizations that use the services for marketing. What if a company wants to retrieve something a former employee wrote on Facebook? If the individual posted the comment on his personal account, the company has no right to access it.

That means companies must consider constantly collecting the content of all employees' posts as a safeguard. Certain regulated companies in financial

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CLOUD COMPUTING

Continued from page 26

services already do this, notes Murphy.

Companies that don't do that might encounter difficulties if they need to retrieve content from social sites. Although social media companies say that anyone can write to their open APIs to get the data they need, "accessibility changes on a regular basis as the APIs of the vendors change," Murphy points out.

In addition, how long would it take to download all the data? Murphy says most sites "throttle their APIs," which could slow downloads or search results. Some e-discovery service providers have started to target this problem. "They pay a lot of money to be in these API programs," he says. "They are essentially buying less throttling."

Know the Location of Your Data

Whatever type of cloud you're dealing with, it's important to know exactly where your data resides. In some cases, a cloud vendor might be storing it in a data center in a different country, where different data privacy and e-discovery rules apply.

Further complicating matters is the possibility that

your primary cloud provider could be using subcontractors. That's frequently the case, says Kunick, meaning "it's more likely that your data will reside in several locations." Even if you have an iron-clad contract with your primary provider, can that vendor access information in a prompt and defensible way if the data is held by a subcontractor?

Before there was a cloud, companies would contract with large managed service providers and would spell out most of these provisions in long, detailed contracts, Kunick says. But most contracts with cloud providers don't cover such details. "With cloud service providers, the contracts are seldom longer than 10 pages," he says.

Beware Renegade Business Units

Even if contracts cover every detail, shadow IT activities within corporations can be a source of other e-discovery problems. Charles Skamser, president and CEO of consulting firm eDiscovery Solutions Group, has spent several months interviewing some 60 cloud service providers. Most told him that their clients aren't asking about e-discovery. In fact, "some [cloud service providers] even said, 'What's e-discovery?'" Skamser reports. In what may be a more telling finding, Skamser's research indicates that a high percentage of cloud customers are "renegade business units" of big companies seeking to do an end run around what they perceive as unresponsive internal IT organizations (see "The Upside of Shadow IT," page 18).

This could be a recipe for disaster. If a large corporation is sued and presented with an e-discovery request, the general counsel would likely ask the IT department for help. The attorney might not ask a particular business unit, and even if he did, the business unit's manager probably wouldn't know what to do and the unit's contract with the vendor probably wouldn't include any e-discovery provisions, Skamser explains.

Develop a Comprehensive Plan

Above all, a corporation should have a comprehensive information governance and discovery plan that covers all sources of data, including the cloud, says Murphy. The plan needs to cover not only how to conduct e-discovery on data stored in the cloud, but also how to review that data alongside data residing elsewhere. "You need to apply the same discipline on all data sources," he notes.

It's not too late to prepare for e-discovery on cloud-based data, says Murphy. "Best practices are beginning to emerge, and... companies have the opportunity to get ahead of the curve," he wrote in a recent report.

"The key is to treat cloud-based sources of data like any other data source," says Murphy. "Include it in data maps, have a plan for collecting and preserving it, know how to manage the chain of custody, and understand when to dispose of the data so that it poses no e-discovery risk." *

Harbert is a Washington, D.C.-based writer specializing in technology, business and public policy and a frequent Computerworld contributor.

FLAVORS OF E-DISCOVERY

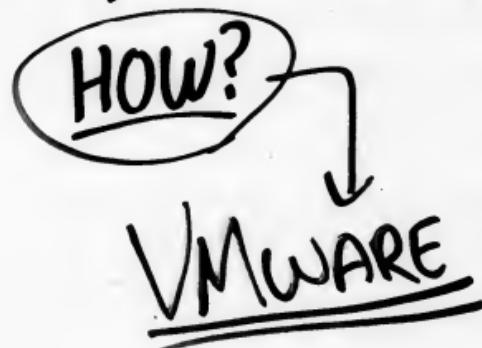
SIS THE CASE with all things cloud-related, "e-discovery in the cloud" means different things to different people. This story focuses on e-discovery of data that has been stored in the cloud. But e-discovery and the cloud intersect in a number of ways. Here's how Christine Taylor, an analyst

at Taneja Group, delineates the market:

- **SaaS-based e-discovery:** To some, "e-discovery in the cloud" means using the cloud to deliver tools used for e-discovery. These SaaS packages typically cover one of several e-discovery tasks, such as collection, preservation or review.
- **Hosted e-discovery:** E-discovery in the cloud can also mean hiring a hosted services provider to conduct e-discovery on data stored in the cloud. There are two types of hosted e-discovery. In one scenario, a customer stores data in the cloud with the understanding that the cloud vendor will do e-discovery on that data if the need arises. In the other scenario, a customer keeps its archives in-house, but if it encounters legal trouble it sends the relevant data to a service provider that takes care of e-discovery.
- **E-discovery on data stored in the clouds:** A third type of e-discovery in the cloud involves e-discovery on data that a user has stored in the cloud without making arrangements with the vendor about how e-discovery will be handled. This is risky, says Taylor. The service-level guarantees of even the most trusted cloud vendors "are notoriously poor," she wrote in a report, adding that vendors often "have few mechanisms in place to report on physical data locations to their customers."

— TAM HARBERT

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HELP FOR THE HELP DESK

Organizations work to improve the help desk by finding 'teaching moments' for users and focusing on efficiency.

BY JOHN BRANDON

A

HELP DESK can be a real lifesaver for employees, not to mention a productivity boost. If a keyboard stops working or Outlook keeps crashing, a technician is just a phone call away. Even complex problems can usually be resolved internally, and relatively quickly, without the need for an outside vendor.

Yet, help desk technology is typically slow to evolve. Many large organizations still track tickets in complex, aging systems that aren't adept at pinpointing recurring problems.

don't work well on the latest smartphones or tablets, and don't provide detailed reports about average call times or how long it takes to resolve issues.

"Most corporate help desks are outdated," says Gartner analyst Jarod Greene. Many organizations are stuck using tools that merely report on the number of calls per day, month and year and don't have a clue about what calls "feedback loops" — in other words, the recurring problems within an organization. That's a critical issue, Greene says, because over 50% of the perceived value of an IT organization comes from the help desk.

So if the help desk is stuck in the 1990s technology-wise, it's a good bet that IT's reputation is suffering, too.

"They end up automating bad processes, and fail to gain real efficiencies from the investment," Greene says.

Some organizations have found a way to improve the help desk. Whether it's a "teaching moment" at the University of Georgia, a system that provides more efficient tracking at Peugeot, or a way to watch for ticket patterns at De Beers Canada, the help desk is getting a much-needed assist.

University of Georgia:

At the University of Georgia, with 10,000 employees and an enrollment of around 35,000 students, the help desk staffers have to perform triage on support requests quickly, resolve them if possible, and then pass the tough cases up to second-level support.

When calls are escalated, the help desk shifts gears. According to Rachel Moorehead, an IT professional assistant and supervisor at the university, calls become more than just a way to resolve problems.

"Every call is a teaching moment," she says, describing how help desk staffers tailor each interaction to the caller's technical expertise. When an IT major calls in about a problem with a login to an Outlook server, for example, staffers might explain how the logging files work. Even if the student is not an IT major, they still pass along tips — and generally find that every student and faculty member is open to the advice. The university uses BMC Remedy to log the initial call, and then Bomgar for screen-sharing.

Moorehead estimates that almost all of the university's second-level IT support tickets involve some sort of extra instruction.

Because support calls are focused on educating users, the goal is not necessarily to resolve problems quickly. The average resolution time for support calls is 5.17 hours, and an average screen-sharing session lasts 33 minutes. This compares to an industry average of one day for resolving issues of low to medium severity, according to Greene.

The help desk handled 4,395 support calls in the month of November alone, customizing responses to the needs of the users and their specific problems.

"This is the IT help desk equivalent of 'give a man a fish and you feed him for a day, but teach him to fish and you feed him for a lifetime,'" says Charles King, an analyst at Pund-IT.

Greene says the university is on the right track in how it uses a tiered strategy. The first level roots out problems quickly; the second tier uses remote sessions to provide more thorough support. That's important, he says, because of the average costs involved.

Initial calls to IT support can cost a company \$1 to \$10 per ticket; that's just for initial contact by phone or email to log the issue. Once the call gets to an actual human for first-level support, the cost rises to between \$10 and \$37 per transaction. If a more technical staff member becomes involved for second-level or even more complex issues, the costs are \$37 to \$250 per ticket.

"Using a remote-control and collaboration solution, Level 2 can help Level 1 resolve issues more efficiently, with the goal being to reduce escalations," says Greene. "In the same context, Level 1 can use remote control to teach end users how to resolve their own issues or guide them to knowledge-management documentation."

The point is not just to correct some problem or mistake, but to help ensure that the end user understands what caused the problem and will know how to prevent or address similar problems in the future, King says. Ideally, this approach will lead to fewer help desk calls or "at least a better informed and more capable workforce."

Peugeot Netherlands:

The Netherlands branch of French automaker Peugeot supports 179 car dealerships throughout Europe and another 160 commercial users in the head office in Utrecht. The help desk employs 26 technicians and processes about 3,750 tickets per year, or about 72 each week, on average.

Richard Nolting, the help desk manager, says the company wanted to improve efficiencies. In 2010, the help desk was resolving almost 90% of support issues in 2.4 days on average, bettering a goal of 80% set by the standards body ISO, but Peugeot wanted to do even better.

The company also wanted more flexibility. Nolting says some help desk systems are overly "canned," with automatic, robotic-sounding messages sent back to users. To make the communication more personalized, Peugeot needed more features. For example, Nolting says, he wanted a system that lets technicians send SMS alerts to users so IT staffers can communicate from wherever they happen to be in the building. Other goals included building a knowledge base of support calls and allowing users to create their own personalized tickets.

STAFF MANAGEMENT

The company started using Kayako, a collaborative help desk program. Nolting says a key feature is the ability for every agent to access all support-related emails. When agents create a ticket, they enter a user profile. Agents can then click an option to start a voice-over-IP call, engage in live chat, or begin a screen-sharing session.

While other help-desk tools might allow these activities, Nolting says, they are more ad hoc and not necessarily recorded as part of the support call. Tracking is important to him, because it helps his organization avoid having to manually sort and manage tickets.

MOST CORPORATE HELP TEAMS ARE OUTDATED.

JAROD GREENE.

"We made extensive use of Kayako's mail parser rules, workflows and smart filters," Nolting says, explaining how tickets can be automatically assigned to specific managers and tracked accordingly. Over the past year, he says, support calls have improved to a same-day resolution average of around 94%. And the total time to resolve support issues changed to 1.8 days on average, down from 2.4 days.

Tracking all tickets is immensely helpful in the long term, says Greene. "Only well-documented processes can be transformed into structured workflows. So if the data is not captured in ticketing tools, it will be hard to find and re-use should the [same] issues ever arise again." Tools like Kayako "keep out-of-band conversations from going into the garbage, and let IT operations groups and administrative teams better understand work patterns in support of processes," he says.

Peugeot is using Kayako both to simplify the query process and as a tracking and auditing tool, says Pundi-IT's King. "This should help increase the efficiency of help desk processes, but it also creates records to fulfill internal auditing processes," he says. Another potential benefit: Search and analytics could be applied to gain insight into recurring problems or employee and dealership usage patterns.

De Beers Canada:

THE PAPERLESS HELP DESK

De Beers Canada, the mining arm of a company probably best-known in the U.S. for its high-end jewelry stores, has found a way to make the help desk entirely paperless. With two remote mines of about 400 employees each, and headquarters in Toronto with about 100 employees, the company wanted to streamline operations. One goal was to

reduce the number of help desk tickets.

James Ross, corporate IT manager for the help desk, says the company has reduced tickets from 700 per month to about 500. One method for streamlining: Tickets are grouped according to incidents, so technicians can address the root cause and prevent more calls about the same problems. They achieved this by monitoring help desk tickets and predicting problems rather than waiting for things to happen.

For example, they used to be surprised by requests for new hardware or business software. But now help desk staffers can see patterns from the same department, around the same time of year, and can be better prepared for those requests if, say, bandwidth is a problem.

De Beers uses ManageEngine's Service Desk Plus to group tickets, send SMS alerts to IT staffers, and record electronic signatures for all tickets. Although the company does not use the mobile version of the app today, it plans to add that capability.

Ross says a key new feature is that all help desk activities are audited and can be monitored remotely, which is helpful for workers in Toronto trying to solve problems at the mines. This remote monitoring used to be an ad hoc, manual process.

The reporting has an added benefit beyond auditing requirements: Understanding root causes.

"Most organizations can't perform trend analysis on tickets — they just react to them as they occur," says Ross, who adds that the company also uses the help desk for facility-related requests, such as building repairs or HVAC upgrades, and may start using it for human resources activities such as processing new hires and departmental changes. The company's help desk system requires staffers to log calls and track tickets, and there's no reason the same software can't be applied to monitor other types of activities.

"De Beers is following a path similar to Peugeot's, though it seems a bit more structured on the front end — e.g., proactive grouping linked to root causes," says Pundi-IT's King. "Running the process remotely should also allow the company to manage and support widely dispersed facilities and workers, or to consider engaging a third party to operate the [help desk] service at some future point."

In each of these examples, one thing is clear: The help desk is more than a place to call for help. Organizations are using support tools to teach users to solve their own problems, generate detailed reports that help identify root causes, and comply with complex auditing requirements by tracking and monitoring all calls.

While the basic idea of keeping employees productive is a driver, improving overall processes in the company can be a major secondary benefit when the help desk gets the latest tools. ♦

Brandon is a former IT manager at a Fortune 100 company who now writes about technology. He has written more than 2,500 articles in the past 10 years. You can follow him on Twitter (@jmbrandonbb).



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JAMES GREENE, GARTNER ANALYST

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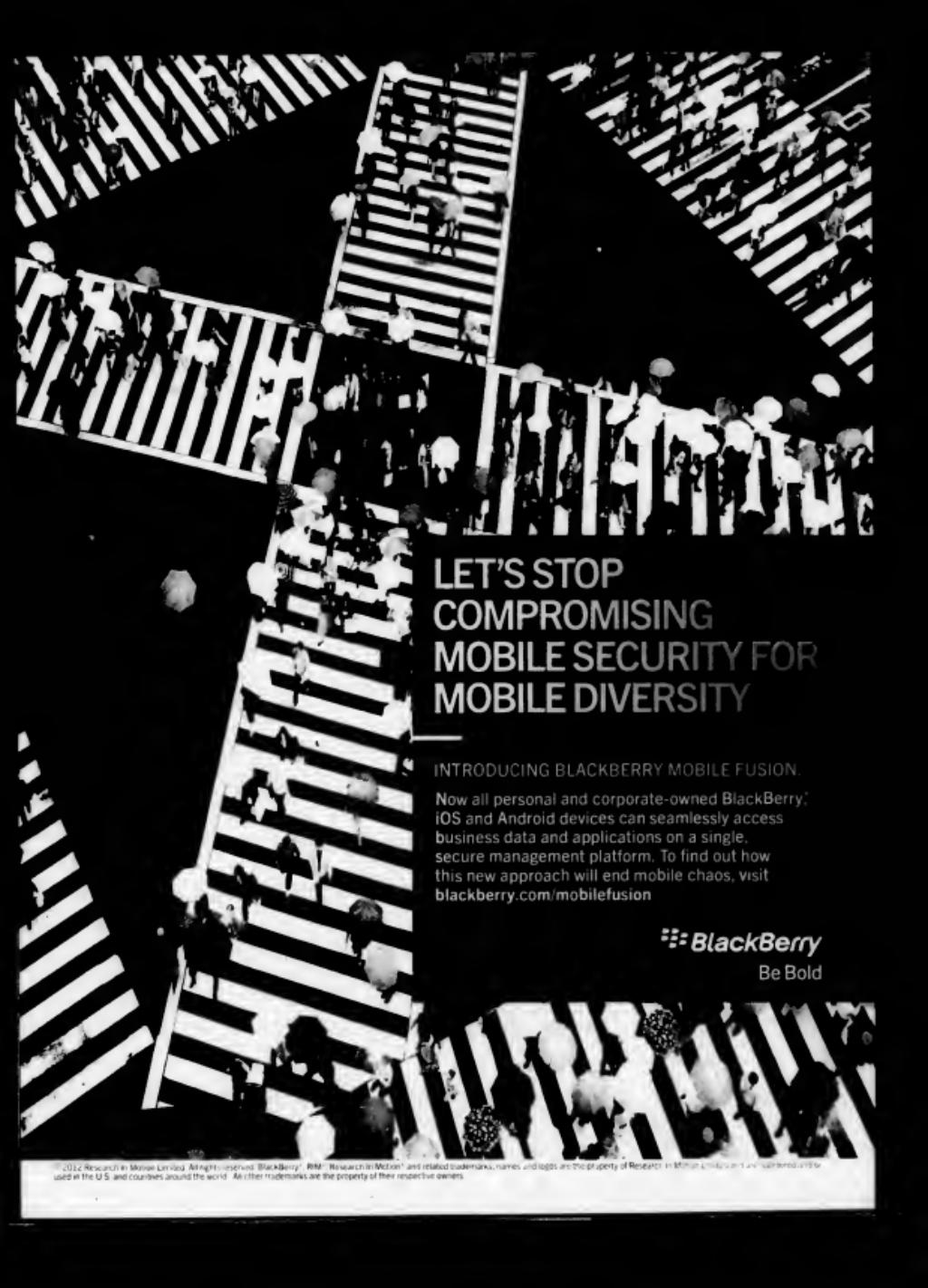
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Security Manager's Journal

MATHIAS THURMAN

Who's Got Your Mail?

I'M ALWAYS AMAZED by the various ways that security deficiencies find their way to the top of the ocean — you know, that ocean we're all trying to boil.

Last week, one of the managers in our sales department discovered a security lapse by chance. He had terminated one of his sales associates and wanted to review that person's email for correspondence related to outstanding sales deals. We give such managers access to their reports' Exchange mail for just this sort of situation.

The manager was typing in the person's name, and it auto-filled before he could finish. So he clicked OK and started looking around. But hold on — the inbox seemed to belong to one of our executives, not the terminated sales associate. Auto-fill had provided the name of the executive, and the sales manager hadn't noticed. That wasn't a problem — but how was it that he had then been able to open the inbox?

Fortunately, the manager called the CIO to explain what had happened. Naturally, the CIO then called me.

I found out that the executive's email

was configured to give any employee in the company access. Of course, we immediately dialed that back so that the executive's admin was the only person with access other than the executive herself. Then I called together my incident response team: one of my security analysts, the lead Exchange administrator, the manager of the help desk and a few other IT folks. We began investigating and brainstorming likely scenarios.

First, we checked logs to see who had configured access for that inbox and who had accessed it — or we set out to do that, but there were no logs enabled for either the executive's desktop or the Exchange server.

Seems we hadn't enabled these types of logs because they consume a lot of disk space and cause performance issues.

I then had my security analyst search our security incident and event management (SIEM) tool for any sign that the executive's PC had been afflicted by malware. I also had him ensure that no resident malware was running on it.

Next, I reviewed help desk tickets. Sure enough, a ticket had been opened about four months earlier to configure

More executives had improperly configured mailboxes — as did about 40 other employees.

Trouble Ticket

By Mathias Thurman
Security manager
and author of *Security Manager's Journal*

Editor's Note: This column is a continuation of the "Security Manager's Journal" column that appeared in the April 2012 issue of Computerworld.

access to the executive's calendar. The technician who had completed the ticket assured me that he had delegated access only to the executive's admin.

I wondered whether other users' inboxes might be similarly exposed, so I had one of the Exchange administrators generate a report to tell us if any mailboxes were configured for global access. Sure enough, several more executives had improperly configured mailboxes, along with about 40 other employees.

Interestingly, the help desk tickets showed that the same technician who had been responsible for the original executive's Exchange configuration had also configured the delegated access for the other executives with wide-open inboxes. Logic suggested we had found the root of the problem.

The technician's manager and I decided to hold a training session for the help desk on the proper configuration of delegated access to Exchange inboxes. And who better to conduct this training, we figured, than the very help desk technician who seemed to have been doing things wrong. No finger-pointing, but this approach should ensure that the person most in need of the training really got the lesson.

We are also working to make logging possible on the Exchange server and to direct the logs to our SIEM tool. And we are investigating ways to keep people from enabling delegated access without first opening a help desk ticket. If that doesn't work, we'll have to ensure all employees are trained on the proper use of this configuration.

And now I have an additional audit to add to my list of regular activities. • This week's journal is written by a real security manager. "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.



S.J. VAUGHAN-NICHOLS

Facebook + Instagram = One Big Acquisition Flop

When you boil it all down, Facebook is spending \$1B for some Web 2.0 software.

I KNOW, I KNOW. Facebook's acquisition of Instagram hasn't even been finalized yet and I'm already calling it a complete waste of a billion dollars. How can I say that? Easy.

Let's look at the facts, shall we? Facebook paid about \$28 for each of Instagram's 35 million users. As such things go, that doesn't seem so bad

— as long as Instagram's users stick around. But the reality is that faithful fans of the photo-sharing program are royally ticked off by the deal. Those who are frantic to get their pictures out of Instagram before Facebook takes over may well be wary of Facebook's lousy privacy record. If you don't want your Instagram photos used in Facebook ads, you'd better make sure you have your privacy settings adjusted properly — and then hope Facebook doesn't change its privacy settings yet again.

Moreover, \$28 per user is cheap only if Instagram's users aren't already Facebook users. In its pre-**IPO** S1, Facebook claims it has 845 million active monthly users. I strongly suspect that there's a good deal of overlap between that 845 million and Instagram's 35 million.

So when you boil it all down, what Facebook has really bought is some Web 2.0 software for tweaking pictures. I haven't programmed in years, but I bet I could put together a team of developers, whip up an Instagram clone, and launch it on the Amazon Elastic Compute Cloud over a weekend. This is not rocket science.

Mind you, I'm not sure that Steven's Instagram would be worth even the six figures it would cost to build. Today, Instagram's cuties photo filters are popular — but they generate no revenue. Tomorrow, they could be as passe as Pet Rocks.

Here's what will happen: Facebook won't see a noticeable increase in users. And Instagram fans who loathe the idea of Facebook getting its hands

on their images will move to another platform.

What the heck, though. Mark Zuckerberg is still mostly playing with fantasy dollars, and if he wants to waste a billion of them on Instagram, he doesn't have stockholders to answer to — yet.

And, as dumb as this move was, it's not even close to such winners as these:

5. News Corp. buying MySpace for \$580 million in 2005. It finally managed to dump the social network for less than a dime on the dollar in 2011.

4. Microsoft grabbing digital marketing services agency aQuantive for \$6 billion. You might not remember this one, which would be fine by Microsoft. In trying to play catch-up, it paid about twice what Google had paid for Doubleclick, and got much less in return.

3. Oracle acquiring Sun for \$7.4 billion. Larry Ellison claimed that he bought it for Java and Solaris. How's that working out for you, Larry?

2. Yahoo paying a combined \$9 billion-plus for Broadcast and GeoCities. Yahoo is still paying the price for these two badly thought-out 1999 acquisitions. Those errors in judgment seem to be the most comparable to Zuckerberg's mistake.

1. Time Warner combining with AOL. For sheer dot-com insanity, you can't beat this deal. A better use of the \$350 billion might have been to fuel electrical plants with dollar bills.

But seriously, these examples represent the good news for Zuckerberg when it comes to the Instagram deal: It's not the worst tech acquisition ever made. *

Steven J. Vaughan-Nichols has been writing about technology and the business of technology since CP/M-80 was cutting-edge and 300bps was a fast Internet connection — and we liked it! He can be reached at sjvn@vna1.com.

Career Watch



What Is Working Remotely Worth to You?

Respondents to a survey were asked what they would give up for the opportunity to work remotely.

- 78% would forgo free meals in the workplace
- 54% would give up their employer-paid cellphone plan
- 31% would accept a reduction in paid vacation
- 25% would take a salary reduction

Note: Multiple responses allowed.

SOURCE: ONLINE SURVEY (1,074 RESPONDENTS) CONDUCTED BY PROJECT MANAGEMENT AND COLLABORATION VENDOR WIMBIE, DECEMBER 2011

PHOTO: GETTY IMAGES

Silicon Valley Tops in Tech Pay

Here are the top-paying U.S. cities for tech jobs.

1	San Jose	\$100,452
2	San Francisco	\$82,759
3	New York	\$80,392
4	Washington	\$79,448
5	Boston	\$78,000
6	Los Angeles	\$64,705
7	Brooklyn	\$64,000
8	Philadelphia	\$63,529
9	Chicago	\$64,577
10	Dallas	\$64,700

SOURCE: EXHIBIT COHEN SURVEY OF 3,000 TECH JOBS AND SALARIES, 2012

Q & A

Roy Cohen



The career coach

and author of *The Wall Street Professional's Survival Guide* talks about handling a request for your Facebook password in a job interview

Can a person simply refuse a request to hand over his Facebook password? Yes. No one is required by law to provide a Facebook password. But there is always a consequence for any decision we make. In this case, if you refuse, you may be eliminated as a candidate.

It is possible that the company is testing you and your good judgment. If the position you are interviewing for requires the ability to negotiate unreasonable terms and conditions, then not providing the information requested may be the desired response. In that case, saying no with grace and tact may be viewed as an asset rather than a liability. Before you jump to any conclusion, ask about the request. Although the question may initially appear to be unreasonable, it may be that there is a legitimate reason to ask it.

Some people who have been out of work for several months might not feel that just walking away is an option. What can they do? Saying no is not the only option. Offering partial information and an explanation may satisfy the interviewer. The real question is how much the interviewer needs to know.

If you really believe that a line may have been crossed but you don't want to jeopardize your candidacy, the "yes, but..." response is an option. In this case, you express a willingness to provide access, but at the same time you request an explanation. Sometimes the interviewer's intentions are harmless. It may be that the interviewer is uninformed – it could be cultural – and doesn't know any better. You may have to explain that he's welcome to have access to your public information but that there are sections of the site restricted to friends and family for obvious reasons.

Are such requests getting more common, or have there been only isolated incidents? In this market, where a lot is riding on making a perfect hiring decision – i.e., one where virtually all candidate risk has been eliminated – it is easy to understand why a company would make every effort to learn as much as possible about a potential candidate before making a commitment. Questions that are commonly viewed as illegal – those involving age, race, religion, political affiliation, etc. – are considered inappropriate, but they do get asked occasionally. When they are raised, it is usually by uninformed interviewers or those from cultures where requesting this sort of information is standard practice. The rest of us have been socialized to know to never ask them.

So it is easy to understand why and how an interviewer might request confidential information like a password that should have no bearing on a candidate's potential to be successful. The precedent for asking has already been set by illegal questions. Fortunately, just like illegal questions, the negative publicity has been so immediate and so strong that these sorts of requests will be the exception rather than the rule.

– JAMIE ECKLE



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SHARKTANK

TRUE TALES OF IT LIFE AS TOLD TO SHARKY



out, bringing down the system completely. After that, the facilities people were told to keep their hands off the hardware and let the vendors make the mistakes."

Where'd He Go?

It's 4:00 p.m. on a Friday when this small IT group starts its HR software upgrade, with conference-call help from an analyst provided by the vendor. It looks like things are going fine, so 10 minutes into the process the analyst explains he has to drop off the call

briefly for a meeting with his supervisor. "At 4:30, his supervisor called me," reports a pilot fish on the team. "He informed us that our analyst was no longer with the company." I asked who would be working on our conversion. He said, "We will have to assign someone to that early-next week." My response: "But the conversion is running now!" Supervisor promises to find someone immediately, but fish can do the time-zone math — the vendor's staff has left for the weekend. "The conversion did error out, and the vendor didn't assign anyone until Monday," sighs fish. "We now, only half jokingly, ask every vendor's analyst if there is any possibility his employment might be cut short for performance reasons."

» **Stick with Sharky!** Send your true tale of IT life to sharky@computerworld.com. You'll score a sharp Shark shirt if I use it.

Power-Sharing Arrangement

The boss needs a power supply for his PC's speakers — and unfortunately for this pilot fish, there aren't any to spare. "So I 'liberated' Mark's speaker power supply," says fish. "This happened when Mark was out of the office and I neglected to say anything. A couple of months later, Mark said, 'My sound doesn't work on my computer.' By the time I got to check it out, both Mark and Wayne were out of the office, so I borrowed

Wayne's power supply and connected it to Mark's speakers. Another few months went by, and Wayne told me, 'The sound doesn't work on my computer.' So I swapped the power supply back from Mark's PC. I continued this for almost a year, until Wayne retired."

Impossible, Huh?

It's 5 a.m. when this IT pilot fish gets a call from the data center: The system drives have lost half their power supply. "As everything has redundant power supply, I notify the boss and

say I'll have the vendor in at 8 a.m." fish says. "The boss, vendor rep, facilities manager and I all meet at 8 a.m. to investigate what has happened. After I pull a few tiles, it's apparent that the twist-lock plug was yanked out of the socket when new cables were run under the floor. The facilities manager says, 'It's not possible for the cables to yank the plugs out,' and proceeds to grab one of the plugs and shake it. Unfortunately, it was the other half of the power supply, and it, too, had been loosened by the cable pull. It fell

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OPINION

SCOT FINNIE

Microsoft is gambling its reputation with its upcoming operating system.

Scot Finnie is Computerworld's editor in chief. You can contact him at slimnie@computerworld.com and follow him on Twitter (@ScotFinnie).

Playing the Wrong Hand With Windows 8

THE PC IS DEFINITELY NOT DEAD FOR MICROSOFT (and it won't be for a long, long time), but Windows 8 might hasten its decline.

On a tablet that properly supports Windows 8, the beta version of the operating system shows the careful thought that Microsoft

put into its design. It supports more elaborate gestures than other tablet operating systems. There's also a cool sidebar feature that lets you work on two apps at the same time. Some of the apps that Microsoft is creating for Windows 8 are a little too simplistic for my taste, and the library of third-party Windows Phone 7/8 apps has a long way to go, but I'm impressed with the design of Windows 8 on tablets.

But with Windows 8, the medium is the message. Put the same Consumer Preview of Windows 8 on a desktop PC and the experience takes a step backward from Windows 7. It looks like the baby blocks of operating systems. Placing the Start button in a cloak of invisibility isn't a smart move. It shouldn't be difficult for Microsoft to display the Start button on desktops while not displaying it on tablets. I hope the company rectifies that before launch. Why relegate 17 years of common desktop user experience to the trash can? It's reminiscent of the Ribbon in Microsoft Office.

Will Windows 8 be successful on the desktop? Of course. People like to snicker about Windows Vista, but according to Net Applications, Vista has a larger market share (about 7%) than the combined share of the two most widely used versions of OS X, Lion and Snow Leopard. With the huge installed base and OEM support that Windows has, Microsoft prints money with every operating system release.

Even so, Microsoft is gambling its reputation with Windows 8. The question is whether consumers will be happy with it; enterprise buyers have little incentive to upgrade over the short run.

Many are quite happy with Windows 7. Think of how long XP lasted.

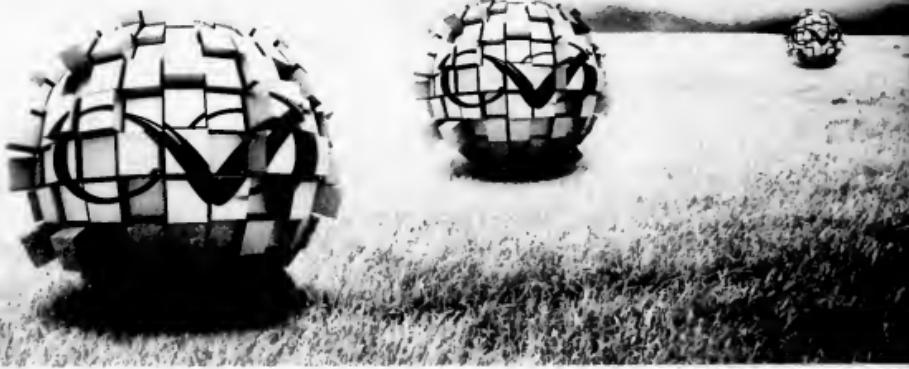
That means that for the next couple of years, Windows will be a tablet operating system that secondarily targets consumer PCs. Microsoft is playing catch-up again, this time in mobile computing, but no technology company plays that game better. It also manages its platform with ISVs, IHVs, OEMs and customers better than any other tech company. Nonetheless, on the desktop, Windows 8 is going to be a leap of faith that many may not take.

Here's why that should matter to Microsoft. Tablets are selling like hotcakes, right? Yes, but when you compare the tablet market and the PC market, the latter is quite a bit larger. Forrester says that two-thirds of the smartphones, tablets and PCs used in business are running some form of Windows. The vast majority of those are PCs. Although Forrester expects that figure to drop to 50% by 2016 as iOS and Android continue to rise, Microsoft can't afford to abandon its huge installed base of Windows PCs in its zeal to play catch-up on mobile.

Plus, Windows 8 tablets have a steep road to climb. An IDC report predicts that Windows Phone will have a 20% share of smartphone shipments in 2016. The same report predicts that iOS will also have 20% of the shipments and that Android will have 47%.

So Microsoft is going all in with Windows 8 in a tablet market it can't dominate, while putting its cash-cow desktop operating system business at risk. That doesn't seem like a winning hand. •

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